

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

The US Forest Service (USFS), Lake Tahoe Basin Management Unit (LTBMU) and Tahoe National Forest; the Tahoe Regional Planning Agency (TRPA); and the California Public Utilities Commission (CPUC) are preparing a joint environmental document for the California Pacific Electric Company (CalPeco) 625 and 650 Electrical Line Upgrade Project. The document is an environmental impact statement (EIS) for the LTBMU and Tahoe National Forest prepared pursuant to the National Environmental Policy Act (NEPA) (42 U.S. Code 4321-4347), the Council on Environmental Quality (CEQ) Regulations Implementing NEPA (40 Code of Federal Regulations 1500-1508), Forest Service Manual 1950, and Forest Service Handbook 1909.15; an EIS for TRPA pursuant to the Tahoe Regional Planning Compact (Public Law 96-551), Code of Ordinances, and Rules of Procedure; and an environmental impact report (EIR) for CPUC pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). All three agencies have determined that an EIS/EIS/EIR is needed to effectively analyze the proposal and evaluate impacts. In addition, the US Army Corps of Engineers (USACE), as a federal cooperating agency, will be responsible for the scope and content of the NEPA portion of the environmental document as it pertains to lands within its jurisdictional boundaries in Martis Valley. CalPeco is the project applicant.

The proposed 625 and 650 Electrical Line Upgrade Project would consist primarily of an upgrade of CalPeco's existing 625 and 650 electrical power lines and associated substations from 60 kilovolt (kV) to 120 kV to allow the entire North Lake Tahoe Transmission System to operate at 120 kV. The project would include six primary components: 1) removal of the existing 625 Line and construction of a new, rerouted 625 Line; 2) rebuild of the existing 650 Line with potential for realignments based on the action alternatives considered; 3) realignment of two short segments of the 650 Line and removal of the replaced segments; 4) rebuild of the Northstar Tap into a fold (a "fold" allows for service to be maintained at a substation in the event of an interruption in service on either side of the power line feeding it); 5) rebuild of a 1.6-mile long section of the existing 132 Line in the Town of Truckee; and 6) upgrade, modification, and/or decommissioning of six substations. These improvements would increase the ability to maintain the current maximum system loads during an outage on any one of the four sections of the system (described in detail in Chapter 3, Project Alternatives), and decrease reliance on the Kings Beach Diesel Generation Station. In addition, rebuilding and realigning the power lines would reduce the likelihood of outages associated with high winds, downed trees, snow loading, and forest fires, and would improve access to the lines for maintenance, emergency outage response, and repair activities.

This EIS/EIS/EIR does not make a recommendation regarding the approval or denial of the project. The analysis included in this EIS/EIS/EIR is purely informational in content, and will be used by the USFS, TRPA, and CPUC to render decisions regarding approval of project elements within their jurisdiction and selection of an alternative.

ES.1.1 PROJECT AREA

The project features and proposed activities are predominantly located on lands managed by the USFS; these lands are located in the LTBMU and Tahoe National Forest. Portions of the project are also located in the Town of Truckee and the unincorporated Placer County communities of Kings Beach and Tahoe City, on lands within the Martis Creek Lake Recreation Area and Burton Creek State Park, and on private lands.

ES.1.2 PURPOSE, NEED, AND OBJECTIVES

National and state electric reliability standards require that CalPeco ensure that the North Lake Tahoe Transmission System perform safely under normal and contingency conditions. For example, the North American Electric Reliability Corporation Reliability Standard TPL-002-0b requires that CalPeco's transmission system have the capability to supply peak loads at adequate voltage levels without overloading the system components with any one component out of service. The CPUC regulations related to system reliability are contained in California Public Utilities Code Section 399, which implements the California Legislature's "Reliable Electric Service Investments Act," stating that it is the policy of the state, and the intent of the Legislature, that each electrical corporation operate its electric distribution grid in its service in a safe, reliable, efficient, and cost-effective manner [399.2(a)(1)] and that prudent investments continue to be made to protect the integrity of the electric distribution grid [399(c)(1)]. The system cannot currently provide single-contingency reliability during peak loads, even with use of the Kings Beach Diesel Generation Station, and is experiencing peak demands in excess of design capacity. The proposed project ensures that the North Lake Tahoe Transmission System complies with national and state electric reliability regulations as well as safety standards.

The 625 and 650 Electrical Line Upgrade Project is designed to fulfill five primary purposes.

1. Provide normal capacity for current and projected loads.
2. Provide reliable capacity to assure adequate service to all customers during single-contingency outages.
3. Reduce dependence on the Kings Beach Diesel Generation Station.
4. Reduce the risk of fire hazards and outage durations associated with wooden poles and encroaching vegetation.
5. Provide more reliable access to the 625 Line for operation and maintenance activities.

Addressing normal and projected loads, providing single-contingency reliability, and reducing dependence on the Kings Beach Diesel Generation Station would be achieved by upgrading the 625 and 650 Lines and associated facilities (e.g., substations) from 60 kV to 120 kV. Reducing the risk of wildfire hazard would be achieved by replacing existing wooden poles with the proposed steel poles, which are stronger and more resistant to wildfire. In addition, raising the elevation of the lines and widening the vegetation management corridor, both regulatory requirements when converting from the current 60 kV configuration to 120 kV, would reduce wildfire risk and risk of damage from encroaching vegetation. Increased access to the 625 Line for inspection, maintenance, and repairs would be achieved by re-routing the line to a less remote location with existing access roads, and creating new overland travel ways where needed. Improving truck access to the 625 Line for inspections and maintenance would also increase the lines' resilience to outages.

ES.2 SUMMARY OF PUBLIC INVOLVEMENT

The environmental review process for the CalPeco 625 and 650 Electrical Line Upgrade Project began with a public scoping period. A Notice of Intent (NOI) and Notice of Preparation (NOP) was issued to inform agencies and the public that a Draft EIS/EIS/EIR would be prepared for the project, and to solicit views of agencies and the public as to the scope and content of the EIS/EIS/EIR. The NOP/NOI was distributed on March 26, 2012 and the scoping period concluded on April 25, 2012. Scoping notices were mailed to governmental agencies, landowners within 300 feet of the project boundaries, interested individuals, and community organizations. Additionally, public notices were placed in both the Tahoe Daily Tribune and the Nevada Appeal on March 28, 2012. Two scoping meetings were held to allow oral expression of opinion regarding the content of the EIS/EIS/EIR, as listed below.

- ▲ April 17, 2012. Public scoping meeting beginning at 6:00 p.m. at the North Tahoe Event Center, Kings Beach, California.
- ▲ April 19, 2012. Public scoping meeting beginning at 6:00 p.m. at the USFS Tahoe National Forest Offices, Truckee, California.

Scoping comments received are summarized in Appendix A, Notice of Preparation and Scoping Summary Report.

ES.2.1 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Areas of controversy include: purpose and need for the project; impacts to scenic quality; impacts to the recreation experience and access to USFS roads; impacts to forest resources, and maintenance and restoration of access ways and staging areas; effects on water quality; effects on air quality; impacts to public health safety; the effects of helicopter use; and the potential for increases in system capacity to support future development. Additional project details requested by commenters and an assessment of suggested alternatives to the project are included in Chapter 3, Project Alternatives.

PURPOSE AND NEED

Commenters questioned the need to increase the voltage of the power lines (from 60 kV to 120 kV) and the methodology used to estimate future demand. Commenters also questioned the purpose of the Northstar Tap. The planning and design processes are described in detail in Chapter 2, Purpose and Need, and Chapter 3, Project Alternatives.

SCENIC RESOURCES

Commenters were concerned about the scenic consequences of the new, steel poles and larger right of way (ROW). Commenters also requested analysis of the potential aesthetic impacts relative to Truckee's historic district, Truckee's Interstate 80 (I-80) designated scenic corridor, and the Truckee River and Legacy Trail. Section 4.4, Scenic Resources, includes analysis of potential visual impacts of the project, as well as a contour map of viewsheds and visual simulations.

RECREATION

Due to proximity to recreational resources, including the Tahoe Rim Trail, commenters requested analysis of impacts to hiking, camping, and day use. Commenters were also concerned with changes to the USFS roadway network, which is currently used for recreation. Recreational resources are addressed in Section 4.8, Recreation.

FOREST RESOURCES AND RESTORATION OF TEMPORARY WORK AREAS

Commenters requested details regarding the number of trees that would be removed and the treatment of hazard trees. The restoration of current and temporary easements that would be abandoned, staging areas, stringing sites, and other temporary disturbance areas were also topics of comments received. Proposed restoration and maintenance activities are addressed in Chapter 3, Project Alternatives. Details specific to management of forest resources are included in Section 4.3, Forest Resources.

WATER QUALITY

Commenters expressed concern about the potential for construction and maintenance of power poles near the Truckee River, Trout Creek, wetlands, and other stream environment zones (SEZs) to affect surface water quality. Commenters requested a discussion of effects to drainage patterns and identification of project

components within the 50- and 100-year floodplains. Potential disturbance areas and environmental effects of construction and maintenance of the project alternatives are discussed in Section 4.6, Hydrology and Water Quality.

AIR QUALITY

Commenters requested that analysis of potential adverse impacts to air quality from all phases of the project be evaluated. This analysis is contained in Section 4.13, Air Quality, Greenhouse Gas Emissions, and Climate Change.

PUBLIC HEALTH AND SAFETY

Comments were received on the issue of electromagnetic fields, which are addressed in Chapter 3, Project Alternatives, and Section 4.10, Hazards and Hazardous Materials. Commenters also expressed concern that locating the power lines in remote areas would increase the risk of wildland fire. See Chapter 3, Project Alternatives, for a discussion of fire potential, which is anticipated to decrease with the use of new, stronger, fire-resistant poles.

HELICOPTER USE

Helicopters are proposed for use during construction. Commenters requested a full analysis of this project element. Staging areas that may include helicopter landing pads are identified in Chapter 3, Project Alternatives. Chapter 4, Affected Environment, Environmental Consequences, and Mitigation Measures, includes a full analysis of this project element, specifically in Section 4.13, Air Quality, Greenhouse Gas Emissions, and Climate Change and Section 4.14, Noise.

POTENTIAL FOR INCREASES IN SYSTEM CAPACITY TO SUPPORT FUTURE DEVELOPMENT

General concern has been expressed that increasing the capacity of the North Lake Tahoe Transmission System for system reliability would promote, though infrastructure availability, expanded development of the Lake Tahoe region. The necessity of the proposed upgrades to serve existing demand is discussed in Chapter 2, Purpose and Need. See Chapter 5, Other NEPA, TRPA, and CEQA Mandated Sections, for evaluation of the potential for growth as a result of the increased availability of electrical power.

ES.3 SUMMARY DESCRIPTION OF ALTERNATIVES

Through public scoping and agency coordination, four action alternatives were identified for detailed analysis in the EIS/EIS/EIR. As described in Chapter 2, Purpose and Need, the applicant has determined that improved system reliability and resilience to outages would be achieved through upgrade of the existing 625 and 650 Lines and associated substations from 60 kV to 120 kV, which would permit the entire system to operate at 120 kV. The four action alternatives considered in this EIS/EIS/EIR are variations on addressing the following six key project components:

- ▲ rebuild of the existing 650 Line (with potential for realignments based on alternative);
- ▲ removal and realignment of two short segments of the 650 Line to straighten the line and remove angle points (simplifying line construction and maintenance);
- ▲ rebuild of a 1.6-mile section of the existing 132 Line;
- ▲ rebuild of the Northstar Tap into the Northstar Fold (a “fold” allows for service to be maintained at a substation in the event of an interruption in service on the power lines feeding into either side of substation);

for this project, this means that the Northstar Substation could be fed from the 650 Line to the north or south, whereas currently it is a single source feed);

- ▲ upgrade, modification, and/or decommission of six substations; and
- ▲ removal of the existing 625 Line and construction of a new, rerouted 625 Line.

These improvements would increase the ability to maintain the current maximum system loads during an outage on any one of the four legs of the system (i.e., 625 Line, 650 Line, 609 Line, and 629 Line), and decrease reliance on the Kings Beach Diesel Generation Station. In addition, rebuilding and realigning the power lines would reduce the likelihood of outages associated with high winds, felled trees, snow loading, and forest fires and improve access to the lines for maintenance and repair activities.

ES.3.1 ALTERNATIVE 1: PEA ALTERNATIVE

Alternative 1 was developed in the Proponent's Environmental Assessment (PEA) prepared by the project applicant (Sierra Pacific Power Company at that time) as part of the original permit application submitted to the CPUC in 2010. Generally, Alternative 1 (PEA Alternative) would locate the 625 Line closer to the Fiberboard Freeway (a paved road between the Mount Watson area north of Tahoe City and the Brockway Summit area) to improve access.

ES.3.2 ALTERNATIVE 2: MODIFIED ALTERNATIVE

Alternative 2 is a modified alternative, which is similar to Alternative 1 (PEA Alternative), but includes rerouting of some portions of the alignment based on public and agency input received during scoping, additional information gathered during detailed field reviews, and further progress on project engineering and design. The intent of the segment reroutes is to avoid or minimize effects on biological, visual, or cultural resources.

ES.3.3 ALTERNATIVE 3: ROAD FOCUSED ALTERNATIVE

Alternative 3 is a road focused alternative, which re-routes the 625 Line to more closely follow the Fiberboard Freeway and other area roadways and places more of the 650 Line along State Route (SR) 267. Alternative 3 (Road Focused Alternative) includes a double-circuit option segment option that is referred to as Alternative 3A. Alternative 3 (Road Focused Alternative) is intended to maximize the proximity of project facilities to existing roadways in order to minimize the need for new access ways, ground disturbance, and associated environmental effects.

ES.3.4 ALTERNATIVE 4: PROPOSED ALTERNATIVE

Alternative 4 (Proposed Alternative) is a combination of Alternative 3 (Road Focused Alternative) for the 625 Line improvements and elements of Alternative 1 (PEA Alternative) and Alternative 3 (Road Focused Alternative) for the 650 Line improvements. Alternative 4 (Proposed Alternative) allows facilities to be in proximity to existing roadways, while maximizing the use of the already upgraded portion of the 650 Line in Segment 650-5.

ES.3.5 ALTERNATIVE 5: NO ACTION/NO PROJECT ALTERNATIVE

Under Alternative 5 (No Action/No Project Alternative), no upgrade of the existing power lines would occur. This alternative would be associated with increased maintenance activities, including some deferred items, such as ROW maintenance and replacement of existing wooden poles. Lines would be operated close to or above their ratings, which would put the line conductor at high risk of annealing (excessive heating and cooling of a conductor that results in decreased tensile strength). The Kings Beach diesel generators would be used when

needed, but because the permit for the generators limits the annual operating hours, use would have to be judicious so that hours could be retained throughout the year.

ES.4 COMPARATIVE FEATURES OF THE ALTERNATIVES

Chapter 3, Project Alternatives, provides a detailed description of each of the alternatives under consideration. Tables ES-1a through ES-1c provide a side-by-side comparison of major characteristics and potential effects of each alternative, including miles of new power line, miles of new access ways, acreage of disturbance, trees to be removed, and other features.

ES.5 ENVIRONMENTAL IMPACTS AND MITIGATION

Chapter 4, Affected Environment, Environmental Consequences, and Mitigation Measures, of this Draft EIS/EIS/EIR describes in detail the environmental effects that would result from implementation of the project alternatives. Impacts are determined to be: 1) no impact; 2) less than significant (adverse or potentially adverse effects that are not substantial); 3) significant or potentially significant (substantial or potentially substantial adverse changes in the environment, for which mitigation measures are required); and 4) significant and unavoidable (substantial or potentially substantial adverse changes in the environment that cannot be feasibly reduced to a less-than-significant levels with mitigation measures).

The project includes applicant proposed measures (APMs) developed to avoid, minimize, or compensate for the impacts of the project. These APMs were originally proposed in the June 2010 PEA, and have been modified by the applicant during project development and in response to environmental review. These measures are listed in Chapter 3, Project Alternatives. CalPeco has committed to implementing these measures to reduce the potential direct and indirect impacts that could result from the action alternatives. Therefore, the APMs are considered part of the project description. Where impacts are identified that are not addressed by these APMs, or where the APMs are not adequate to reduce impacts to less than significant levels, the EIS/EIS/EIR recommends additional mitigation measures. APMs will be incorporated into the Mitigation Monitoring, Compliance, and Reporting Program developed for this proposed project, and implementation of the APMs will be monitored in the same fashion as the mitigation measures developed in this EIS/EIS/EIR.

Table ES-2 (at the end of this chapter) summarizes the potential environmental effects that would result from implementation of the alternatives; describes mitigation measures to address significant and potentially significant environmental effects; and identifies the significance of impacts both before and after mitigation.

Based solely on impact significance conclusions, there is not a clear distinction in the level of impact among the four action alternatives. As described in the various impact discussions in Chapter 4, Affected Environment, Environmental Consequences, and Mitigation Measures, where there are differences in environmental effects among the action alternatives, it is often a matter of some degree of more or less effect among the alternatives rather than one or more of the alternatives generating an environmental effect that the others do not. For example, the reduced project footprint resulting from double-circuit segments in Alternative 2 (Modified Alternative), Alternative 3 (Road Focused Alternative), and Alternative 4 (Proposed Alternative) is anticipated to result in reduced ground disturbance relative to Alternative 1 (PEA Alternative), and therefore lesser potential for effects such as discovery of currently undocumented subsurface cultural resources, removal of habitat, and generation of erosion and siltation, but does not remove the potential for these effects all together. All significant and potentially significant impacts related to these issues would be reduced to less than significant levels with mitigation for all action alternatives; however, Alternative 2 (Modified Alternative), Alternative 3 (Road Focused Alternative), and Alternative 4 (Proposed Alternative) would initially result in less effect, or less potential for effect, relative to Alternative 1 (PEA Alternative). Similarly, whereas poles constructed under all four action alternatives could potentially generate conflicts with safe operation of the Truckee Tahoe Airport,

Alternative 3 (Road Focused Alternative) would have the greatest potential for significant impacts because its alignment is closest to the airport runway; Alternative 2 (Modified Alternative) would be less likely to result in significant impacts because its alignment would be farther from the airport runway, and Alternative 1 (PEA Alternative) and Alternative 4 (Proposed Alternative) would be less likely still to generate significant impacts because the alignment would be farthest from the airport runway. However, for all action alternatives, if a significant impact related to airport safety were to occur, the impact could be reduced to a less than significant level with mitigation. The mitigation could consist of placing the line underground, which would generate its own environmental impacts (e.g., additional soil disturbance from excavation) as described in Section 4.10, Hazards and Hazardous Materials.

In many instances, each alternative would result in environmental trade-offs, reducing effects for one environmental issue area, but increasing environmental effects for another. For example, Alternative 3 (Road Focused Alternative) and Alternative 4 (Proposed Alternative) reduce the amount of vegetation removal relative to other alternatives by placing the power line closer to the Fiberboard Freeway in Segments 625-3 through 625-8 between Tahoe City and Brockway Summit. However, by placing the power line closer to the road, it becomes more visible to recreationists and others using the Fiberboard Freeway, increasing the scenic effects. Conversely, the double-circuit segments (Segments 625-9 and 625-10) under Alternative 2 (Modified Alternative) minimize the visibility of the power line by keeping it in a remote location, but result in increased vegetation removal, both due to the location of the power line alignment and the need to create more permanent access ways to the line.

The numeric information for each alternative provided in Tables ES-1a through ES-1c provides an indication of the scope of activity and relative potential for effects under each of the action alternatives. This information may guide the determination of the environmentally preferable or environmentally superior alternative. When considering the 625 and 650 Lines combined, Alternative 3A (Road Focused Alternative with Double-Circuit Option) would have the least impacts in more categories than any of the other action alternatives, including in areas related to access way requirements, disturbance of SEZ (i.e., areas determined by TRPA to generally owe their biological and physical characteristics to the presence of surface or groundwater) and Protected Activity Centers (PACs) for northern goshawk and California spotted owl, and potential for tree removal. Implementation of Alternative 3A (Road Focused Alternative with Double-Circuit Option), however, would result in unmitigable scenic effects along SR 267, and, as a result, is considered infeasible. The measure adopted to address the impact to scenic resources along SR 267 (APM SCE-7) for the other action alternatives is a setback of the power line. This would not be feasible in Segment D-C OH-1A/650-1 for Alternative 3A (Road Focused Alternative with Double-Circuit Option) because there are residences in the setback area. Second to Alternative 3A (Road Focused Alternative with Double-Circuit Option), Alternative 4 (Proposed Alternative) would have the lowest, or the second lowest, values in many categories, including total number of poles required and the acreage of permanent disturbance. Because Alternative 4 (Proposed Alternative) would have the second lowest potential for project effects, based on relatively low values in the key issue areas identified in Table ES-1c, and would not result in unmitigable scenic impacts, this alternative is considered the environmentally preferable/environmentally superior alternative.

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Table ES-1a Alternatives Comparison Summary for the 625 Line																									
Project Characteristic, Resource, Impact	Line Segment																				625 Line Subtotals by Alternative				
	625-1		625-2	625-3		625-4			625-5		625-6			625-7		625-8			625-9*	625-10*					
	625-1 (PEA, RF, RF 3A & PA)	625-1A (Mod)	625-2 (PEA, Mod, RF, RF 3A & PA)	625-3 (PEA & Mod)	625-3 (RF, RF 3A & PA)	625-4 (PEA)	625-4A (Mod)	625-4 (RF, RF 3A & PA)	625-5 (PEA & Mod)	625-5 (RF, RF 3A & PA)	625-6 (PEA)	625-6A (Mod)	625-6 (RF, RF 3A & PA)	625-7 (PEA & Mod)	625-7 (RF, RF 3A & PA)	625-8 (PEA)	625-8A (Mod)	625-8 (RF, RF 3A & PA)	625-9 (PEA)	625-10 (PEA)	PEA	Mod	RF	RF 3A	PA
Total Poles	14	12	27	61	64	15	15	15	26	27	21	26	22	32	37	16	13	13	39	10	258	264	219	219	219
Total Stringing Sites	4	4	4	10	12	3	2	3	7	4	3	3	3	3	6	6	7	6	4	2	46	41	42	42	42
Miles of Transmission Line	0.5	0.5	1.7	3.6	3.8	0.8	0.8	0.9	1.8	1.9	1.1	1.1	1.1	1.9	2.0	0.8	0.8	0.8	2.3	1.2	15.7	12.1	12.6	12.6	12.6
Miles of New Access Way ²	0.6	0.6	2.2	3.4	1.1	0.7	01.0	0.1	2.0	0.0	1.0	0.3	0.0	1.7	0.1	0.6	0.8	0	3.3	0.6	16.1	12.0	4.1	4.1	4.1
Miles of New Access Way on Slopes >20%	0.1	1.0	1.0	1.8	0.6	0.5	0.6	0.1	1.0	0	0.5	0.2	0	0.8	0	0.4	0.2	0	2.2	0.2	8.4	5.6	1.7	1.7	1.7
Miles of Existing Roads Requiring Improvement	0.0	0.0	0.7	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0.1	0	1.2	1.1	0.7	0.7	0.7
Miles of Existing Roads Requiring Improvement on Slopes >20%	0.0	0.0	0.1	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0.1	0	0.2	0.2	0.1	0.1	0.1
Miles of Existing Roads Requiring No Improvement (Paved and Dirt)	0.7	0.7	3.4	5.4	6.5	3.7	3.7	3.8	2.4	2.4	1.9	1.9	1.9	2.2	2.3	0.9	0.9	0.9	5.2	1.6	27.3	20.6	21.9	21.9	21.9
Miles of existing USFS system roads to be used (no improvement)	0.9	0.2	0.7	5.2	5.2	1.2	1.2	1.2	2.3	2.3	1.9	1.9	1.9	1.9	1.9	0.6	0.6	0.6	3.9	0.5	18.8	14.4	14.4	14.4	14.4
Miles of Existing USFS system roads to be used (improved)	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0.1	0	0.5	0.4	0	0	0
Miles of new access ways on USFS Land ²	0	0	1.5	3.4	1.1	0.7	1.0	0.1	2.0	0.0	1.0	0.3	0.0	1.6	0.1	0.4	0.2	0	2.3	0.5	13.4	10.0	2.8	2.8	2.8
Acreage of Temporary Disturbance (including stringing sites)	4.1	4.0	7.4	15.4	20.5	3.0	2.0	5.0	7.6	8.3	3.7	4.3	5.8	5.7	9.8	4.3	4.8	4.4	6.8	4.3	62.1	51.2	65.2	65.2	65.2
Acreage of Permanent Disturbance (including access ways)	2.8	3.4	12.2	29.0	20.5	6.0	6.6	4.3	12.3	9.0	7.6	5.7	5.3	17.0	9.5	6.2	5.5	3.9	23.7	1.9	118.8	91.7	67.5	67.5	67.5
Acreage of Sensitive Habitat Types Within Permanent ROW ^{3,4}	0.4	0.1	0	0.4	0.2	0	0	0	0.2	0.1	0	0	0	0	0	0	0	0	0.1	0	1.1	0.7	0.7	0.7	0.7
Acreage of SEZ Within ROW ⁵	0.6	0.3	0.2	0.8	0.8	0	0	0	0.5	0.2	0	0	0	0	0	0	0	0	0.1	0	2.2	1.8	1.9	1.9	1.9
Hazard Trees (Total Number of Hazard Trees/Cubic Foot Volume) ⁶	0/100	0/100	40/4,200	80/9,700	90/10,100	30/6,100	30/5,900	30/5,800	20/1,500 (PEA) 1,600 (Mod)	20/1,600	20/2,000	30/3,100	30/2,700	30/2,800 (PEA) 2,700 (Mod)	30/2,800	10/1,300	20/3,900	10/1,300	60/8,400	10/1,300	310/37,600	250/31,300	240/28,600	240/28,600	240/28,700

Table ES-1a Alternatives Comparison Summary for the 625 Line																									
Project Characteristic, Resource, Impact	Line Segment																				625 Line Subtotals by Alternative				
	625-1		625-2	625-3		625-4			625-5		625-6			625-7		625-8			625-9*	625-10*					
	625-1 (PEA, RF, RF 3A & PA)	625-1A (Mod)	625-2 (PEA, Mod, RF, RF 3A & PA)	625-3 (PEA & Mod)	625-3 (RF, RF 3A & PA)	625-4 (PEA)	625-4A (Mod)	625-4 (RF, RF 3A & PA)	625-5 (PEA & Mod)	625-5 (RF, RF 3A & PA)	625-6 (PEA)	625-6A (Mod)	625-6 (RF, RF 3A & PA)	625-7 (PEA & Mod)	625-7 (RF, RF 3A & PA)	625-8 (PEA)	625-8A (Mod)	625-8 (RF, RF 3A & PA)	625-9 (PEA)	625-10 (PEA)	PEA	Mod	RF	RF 3A	PA
Trees to be Removed (Total Number of Trees >1” DBH/Cubic Foot Volume) ⁶	550/10,300	560/10,400	4,330 (PEA, Mod, PA) 4,320 (RF, RF 3A)/59,000	8,040 (PEA) 8,020 (Mod)/125,100 (PEA) 125,000 (Mod)	7,240/114,100	2,160/43,200	2,110/41,600	1,970/41,600	4,760 (PEA) 4,770 (Mod)/81,000	3,490/62,600	2,700/39,000	2,460/29,300	2,220/32,800	3,930 (PEA) 4,060 (Mod)/60,100 (PEA) 61,400 (Mod)	3,450/57,100	2,560/30,500	2,840/49,900	1,650/23,600	6,270/106,200	1,550/19,000	36,860/573,400	29,140/457,700	24,880/401,200	24,880/401,200	24,900/401,200
Cubic Feet of Merchantable Timber to be removed (conifers ≥ 9’’) ⁶	7,400 (PEA, PA) 7,500 (RF, RF 3A)	7,500	40,000	85,000 (PEA) 84,900 (Mod)	76,600	28,000	26,800	26,800	61,900	47,700	27,700	19,100	22,300	42,200 (PEA) 43,200 (Mod)	40,000	21,300	35,500	16,700	74,900	12,900	401,300	318,900	277,500	277,500	277,500
Cubic Feet of Biomass to be Removed (including hazard trees) ⁶	2,900	2,900	19,000	40,100	37,500	15,200	14,800	14,800	19,100	14,900	11,300	10,200	10,500	17,900 (PEA) 18,300 (Mod)	17,100	9,200	14,400	6,900	31,300	6,100	172,200	138,800	123,700	123,700	123,700
Northern Goshawk Habitat in Permanent ROW within TRPA Disturbance Zones, Nonurban Areas (Acres) ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.9	1.4	3.3	0	0	0	0
Northern Goshawk Habitat in Permanent ROW within USFS PACs (Acres) ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Spotted Owl Habitat in Permanent ROW within USFS PACs (Acres) ⁴	0	0	0	0	0	0	0	0	1.2	0.8	5.0	3.7	1.8	0	0	0	0	0	0	0	6.2	4.9	2.6	2.6	2.6
Notes: PEA = Alternative 1 (PEA Alternative) Mod = Alternative 2 (Modified Alternative) RF = Alternative 3 (Road Focused Alternative) RF 3A = Alternative 3A (Road Focused Alternative with Double-Circuit Option) PA = Alternative 4 (Proposed Alternative) DC = Double-Circuit Segment																									
* Mod, RR, RF 3A, and PA Alternatives would be double circuited. See Table ES-1B.																									
¹ Values of zero are provided because in these Segments the 625 Line is placed on the same poles as the 650 Line in a double-circuit configuration. Project features and impacts are attributed to the 650 Line for these Segments under RF and PA Alternative.																									
² Many of the new access ways would consist of short spur roads connecting existing roadways to nearby portions of the power line ROW, but are included in the mileage calculations.																									
³ Sensitive habitat types include montane riparian, wet montane meadow, seasonal wetland, fresh emergent wetland, and open water.																									
⁴ Where the new power line corridor would follow and expand the width of the existing 625 Line corridor, acreages include only areas within the newly-disturbed expansion area (i.e., the acreages do not include the existing disturbed/managed corridor).																									
⁵ This value accounts for SEZ in the permanent ROW. Due to the limited footprint of the power poles and the ability to span most sensitive habitats, much of this acreage may not be impacted. SEZ refers to areas mapped specifically as SEZ by TRPA within the Tahoe Basin portion of the ROW. SEZ acreage in the ROW includes all of the sensitive habitat acreages that occur within the Tahoe Basin portion of the ROW (montane riparian, open water, wet montane meadow, and seasonal wetland), plus additional area not mapped and quantified as one of the habitats types.																									
⁶ Data source: Calpeco 925 and 650 Electrical Line Upgrade Project: Supplemental Forestry and Vegetation Management Report, Forester’s Co-Op, May 2013. These totals do not include the temporary impacts associated with removal of the existing 625 Line. Data have been rounded.																									

Table ES-1b Alternatives Comparison Summary for the 650 Line																		
Project Characteristic, Resource, Impact	650-1				650-2			650-3	650-4			650-6	650-7	650 Line Subtotals by Alternative				
	650-1 (PEA)	DC OH-1 (RF & PA)	DC OH-1A (RF 3A)	DC OH-3 (Mod)	650-2 (PEA)	DC OH-2 (RF, RF 3A, & PA)	DC OH-4 (Mod)	650-3 (PEA, Mod, RF, RF 3A, & PA)	650-4 (PEA & PA)	650-4A (Mod)	650-4B (RF & RF 3A)	650-6 (PEA, Mod, RF, RF 3A, & PA)	650-7 (PEA, Mod, RF, RF 3A, & PA)	PEA	Mod	RF	RF 3A	PA
Total Poles	32	32	41	28	41	41	39	111	31	30	51	21	11	247	240	267	276	247
Total Stringing Sites	2	4	2	4	6	6	4	9	3	3	4	3	2	25	25	28	26	27
Miles of Transmission Line	1.3	1.3	1.4	1.2	2.0	2.0	2.34	5.0	1.7	1.6	2.9	1.1	0.5	11.5	11.7	12.7	12.7	11.5
Miles of New Access Way	1.8	1.2	0	1.2	1.8	1.8	3.3	4.6	0	0	0	0	0	8.3	9.1	7.6	6.4	7.6
Miles of New Access Way on Slopes >20%	0.3	0.2	0	0.3	1.0	1.0	2.2	2.0	0	0	0	0	0	3.2	4.5	3.1	3.0	3.1
Miles of Existing Roads Requiring Improvement	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0
Miles of Existing Roads Requiring Improvement on Slopes >20%	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0
Miles of Existing Roads Requiring No Improvement (Paved and Dirt)	2.3	5.1	3.8	3.8	2.2	9.3	7.4	8.3	4.2	4.2	6.3	0.7	0	17.7	24.3	29.6	28.4	29.6
Miles of existing USFS system roads to be used (no improvement)	0	0.5	0.5	0.5	0.2	4.1	4.1	0	0	0	0	0	0	0.2 ⁶	4.6	4.6	4.6	4.6
Miles of Existing USFS system roads to be used (improved)	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0
Miles of new access ways on USFS Land	0.9	0.5	0	1.0	1.3	1.3	2.3	0	0	0	0	0	0	2.2	3.3	1.8	1.3	1.8
Acreage of Temporary Disturbance (including stringing sites)	4.6	6.4	1.5	6.7	5.9	2.0	2.0	19.2	7.0	6.8	11.5	4.6	3.1	44.4	42.4	46.7	41.8	42.3
Acreage of Permanent Disturbance (including access ways)	5.2	8.6	10.7	7.1	13.9	17.8	28.6	25.6	8.2	7.7	15.6	5.4	2.2	69.1	76.6	75.2	77.3	67.8
Acreage of Sensitive Habitat Types Within Permanent ROW ^{2,3}	0.4	0.8	0.2	0.7	0.1	0.1	0.2	3.4	4.3	4.5	0	0.7	0	8.9	9.5	5.0	4.4	9.3
Acreage of SEZ Within ROW ⁴	0.8	1.6	0.3	1.5	0.2	0.2	0.2	0	0	0	0	0	0	1.0	1.7	1.8	0.5	1.8
Hazard Trees (Total Number of Hazard Trees/Cubic Foot Volume) ⁵	10/ 800	10/ 800	0/ 200	20/ 2,200	30/ 3,300	30/ 3,300	90/ 11,900	50/ 6,800	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	90/ 10,900	160/ 20,900	90/ 10,900	80/ 10,400	80/ 11,000
Trees to be Removed (Total Number of Trees >1” DBH/Cubic Foot Volume) ⁵	4,050/ 31,500	4,070/ 33,700	2,970/ 20,600	5,530/ 50,000	2,570/ 37,900	2,570/ 37,900	8,120/ 136,600	10,260/ 116,100 (PEA, Mod) 116,200 (RF, RF 3A, PA)	0/ 0	1/ 0	360/ 2,100	790/ 6,500	680/ 4,000	18,340/ 195,900	25,380/ 313,200	18,730/ 200,400	17,620/ 187,200	18,360/ 198,200
Cubic Feet of Merchantable Timber to be removed (conifers ≥ 9”) ⁵	20,400	22,100	13,000	32,900	25,400	25,400	94,700	72,500 (PEA. Mod, PA) 72,400 (RF, RF 3A)	0	0	1,200	3,800	2,300	124,400	206,200	127,200	118,300	126,100
Cubic Feet of Biomass to be Removed (including hazard trees) ⁵	11,200	11,600	7,600	17,100	12,400	12,400	41,900	43,600 (PEA, Mod) 43,700 (RF, RF 3A, PA)	0	0	900	2,700	1,700 (PEA, Mod, PA) 1,600 (RF, RF 3A)	71,500	106,900	72,900	69,000	72,100
Northern Goshawk Habitat in Permanent ROW within TRPA Disturbance Zones, Nonurban Areas (Acres) ³	0.6	1.6	0	3.6	0	0	3.5	0	0	0	0	0	0	0.6	7.1	1.6	0	1.6
Northern Goshawk Habitat in Permanent ROW within USFS PACs (Acres) ³	0.1	0.2	0	0.2	0	0	0	0	0	0	0	0	0	0.1	0.2	0.2	0	0.2
California Spotted Owl Habitat in Permanent ROW within USFS PACs (Acres) ³	0.1	0.4	0	0.4	0	0	0	0	0	0	0	0	0	0.1	0.4	0.4	0	0.4
<div>Notes: PEA = Alternative 1 (PEA Alternative) Mod = Alternative 2 (Modified Alternative) RF = Alternative 3(Road Focused Alternative) RF 3A = Alternative 3A (Road Focused Alternative with Double-Circuit Option) PA = Alternative 4 (Proposed Alternative) DC = Double-Circuit Segment</div> <div>¹ Many of the new access ways would consist of short spur roads connecting existing roadways to nearby portions of the power line ROW, but are included in the mileage calculations. ² Sensitive habitat types include montane riparian, wet montane meadow, seasonal wetland, fresh emergent wetland, and open water. ³ Where the new power line corridor would follow and expand the width of the existing 625 Line corridor, acreages include only areas within the newly-disturbed expansion area (i.e., the acreages do not include the existing disturbed/managed corridor). ⁴ This value accounts for SEZ in the permanent ROW. Due to the limited footprint of the power poles and the ability to span most sensitive habitats, much of this acreage may not be impacted. SEZ refers to areas mapped specifically as SEZ by TRPA within the Tahoe Basin portion of the ROW. SEZ acreage in the ROW includes all of the sensitive habitat acreages that occur within the Tahoe Basin portion of the ROW (montane riparian, open water, wet montane meadow, and seasonal wetland), plus additional area not mapped and quantified as one of the habitats types. ⁵ Data source: <i>CalPeco 925 and 650 Electrical Line Upgrade Project: Supplemental Forestry and Vegetation Management Report</i>, Forester’s Co-Op, May 2013. These totals do not include the temporary impacts associated with removal of the existing 625 Line. Data have been rounded. ⁶ This is a smaller total because some of the roads used for the 650 Line under the PEA Alternative have been attributed to Segment 625-9, which is not the case for alternatives with double circuits.</div>																		

Table ES-1c Alternatives Comparison Summary															
Project Characteristic, Resource, Impact	625 Line Subtotals					650 Line Subtotals					Totals by Alternative				
	PEA	Mod	RF	RF 3A	PA	PEA	Mod	RF	RF 3A	PA	PEA	Mod	RF	RF 3A	PA
Total Poles	258	264	219	219	219	247	240	267	276	247	505	504	486	495	466
Total Stringing Sites	46	41	42	42	42	25	25	28	26	27	71	66	70	68	69
Miles of Power Line	15.7	12.1	12.6	12.6	12.6	11.5	11.7	12.7	12.7	11.5	27.2	23.8	25.3	25.3	24.1
Miles of New Access Way ¹	16.1	12.0	4.1	4.1	4.1	8.3	9.1	7.6	6.4	7.6	24.4	21.1	11.7	10.5	11.7
Miles of New Access Way on Slopes >20%	8.4	5.6	1.7	1.7	1.7	3.2	4.5	3.1	3.0	3.1	11.6	10.1	4.8	4.7	4.8
Miles of Existing Roads Requiring Improvement	1.2	1.1	0.7	0.7	0.7	0	0.1	0	0	0	1.2	1.2	0.7	0.7	0.7
Miles of Existing Roads Requiring Improvement on Slopes >20%	0.2	0.2	0.1	0.1	0.1	0	0.1	0	0	0	0.2	0.3	0.1	0.1	0.1
Miles of Existing Roads Requiring No Improvement (Paved and Dirt)	27.3	20.6	21.9	21.9	21.9	17.7	24.3	29.6	28.4	29.6	45.0	44.9	51.5	50.3	51.5
Miles of existing USFS system roads to be used (no improvement)	18.8	14.4	14.4	14.4	14.4	0.2	4.6	4.6	4.6	4.6	19.0	19.0	19.0	19.0	19.0
Miles of Existing USFS system roads to be used (improved)	0.5	0.4	0	0	0	0	0.1	0	0	0	0.5	0.5	0	0	0
Miles of new access ways on USFS Land ¹	13.4	10.0	2.8	2.8	2.8	2.2	3.3	1.8	1.3	1.8	15.6	13.3	4.6	4.1	4.6
Acreage of Temporary Disturbance (including stringing sites)	62.1	51.2	65.2	65.2	65.3	44.4	42.4	46.7	41.8	42.3	106.5	93.6	111.9	107.0	107.6
Acreage of Permanent Disturbance (including access ways)	118.8	91.7	67.5	67.5	67.5	69.1	76.6	75.2	77.3	67.8	187.9	168.3	142.7	144.8	135.3
Acreage of Sensitive Habitat Types Within Permanent ROW ^{2,3}	1.1	0.7	0.7	0.7	0.7	8.9	9.5	5.0	4.4	9.3	10.0	10.2	5.7	5.1	10.0
Acreage of SEZ Within ROW ⁴	2.2	1.8	1.9	1.9	1.9	1.0	1.7	1.8	0.5	1.8	3.2	3.5	3.7	2.4	3.7
Hazard Trees (Total Number of Hazard Trees/Cubic Foot Volume) ⁵	310/ 37,600	250/ 31,300	240/ 28,600	240/ 28,600	240/ 28,700	90/ 10,900	160/ 20,900	90/ 10,900	80/ 10,400	80/ 11,000	400/ 48,600	410/ 52,200	330/ 39,600	320/ 39,000	330/ 39,600
Trees to be Removed (Total Number of Trees >1” DBH/Cubic Foot Volume) ⁵	36,860/ 573,400	29,140/ 457,700	24,880/ 401,200	24,880/ 401,200	24,900/ 401,200	18,340/ 195,900	25,380/ 313,200	18,730/ 200,400	17,620/ 187,200	18,360/ 198,200	55,200/ 769,400	54,520/ 770,800	43,600/ 601,500	42,500/ 588,400	43,260/ 599,400
Cubic Feet of Merchantable Timber to be removed (conifers ≥ 9”) ⁵	401,300	318,900	277,500	277,500	277,500	124,400	206,200	127,200	118,300	126,100	525,600	525,100	404,800	395,800	403,600
Cubic Feet of Biomass to be Removed (including hazard trees) ⁵	172,200	138,800	123,700	123,700	123,700	71,500	106,900	72,900	69,000	72,100	243,700	245,700	196,600	192,600	195,800
Northern Goshawk Habitat in Permanent ROW within TRPA Disturbance Zones, Nonurban Areas (Acres) ³	3.3	0	0	0	0	0.6	7.1	1.6	0	1.6	3.9	7.1	1.6	0	1.6
Northern Goshawk Habitat in Permanent ROW within USFS PACs (Acres) ⁴	0	0	0	0	0	0.1	0.2	0.2	0	0.2	0.1	0.2	0.2	0	0.2
California Spotted Owl Habitat in Permanent ROW within USFS PACs (Acres) ⁴	6.2	4.9	2.6	2.6	2.6	0.1	0.4	0.4	0	0.4	6.3	5.3	3.0	2.6	3.0
<div>Notes: PEA = Alternative 1 (PEA Alternative) Mod = Alternative 2 (Modified Alternative) RF = Alternative 3 (Road Focused Alternative) RF 3A = Alternative 3A (Road Focused Alternative with Double-Circuit Option) PA = Alternative 4 (Proposed Alternative) ¹ Many of the new access ways would consist of short spur roads connecting existing roadways to nearby portions of the power line ROW, but are included in the mileage calculations. ² Sensitive habitat types include montane riparian, wet montane meadow, seasonal wetland, fresh emergent wetland, and open water. ³ Where the new power line corridor would follow and expand the width of the existing 625 Line corridor, acreages include only areas within the newly-disturbed expansion area (i.e., the acreages do not include the existing disturbed/managed corridor). ⁴ This value accounts for SEZ in the permanent ROW. Due to the limited footprint of the power poles and the ability to span most sensitive habitats, much of this acreage may not be impacted. SEZ refers to areas mapped specifically as SEZ by TRPA within the Tahoe Basin portion of the ROW. SEZ acreage in the ROW includes all of the sensitive habitat acreages that occur within the Tahoe Basin portion of the ROW (montane riparian, open water, wet montane meadow, and seasonal wetland), plus additional area not mapped and quantified as one of the habitats types. ⁵ Data source: <i>Calpeco 925 and 650 Electrical Line Upgrade Project: Supplemental Forestry and Vegetation Management Report</i>, Forester’s Co-Op, May 2013. These totals do not include the temporary impacts associated with removal of the existing 625 Line. Data have been rounded.</div>															

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
4.2 Land Use			
4.2-1. Introduce uses not listed as permissible in the Plan Area Statement (PAS) or Community Plan, or expand or intensify an existing non-conforming use such that substantial land use conflicts or incompatibility would occur. All components of the action alternatives are listed as permissible in the applicable PASs and Community Plans, except the existing distribution underbuild on the 625 Line within the Lower Truckee (003) PAS and the proposed upgrade of the Kings Beach Substation in the Martis Peak (019) PAS. The existing distribution underbuild in the Lower Truckee (003) PAS is a non-conforming use, but the relocation of the underbuild to the upgraded power poles would neither expand nor intensify this use because the distribution underbuild would simply be moved to the new poles—the capacity, conductor, and related infrastructure would not be altered. The proposed amendment to the Martis Peak (019) PAS would add “Public Utility Center” to the list of permissible uses, would accommodate the expanded substation in the most appropriate location (in the location of the existing substation and more distant from the residential area than would otherwise be allowed), and would allow the decommissioning of the Brockway Substation. The proposed access ways would be accessory to the power lines. The action alternatives would include uses that are listed as both “allowable” and “special” by TRPA Code. The findings in Subsection 21.2.1 of the TRPA Code can be made for those project components defined as special uses in the applicable PAS/Community Plan. Therefore, because the action alternatives would be permissible with the adoption of the amendment to the Martis Peak (019) PAS and necessary special use findings could be made, they would not expand or intensify an existing non-conforming use.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.2-2. Consistency with land use plans, policies, and regulations. Construction, operation, and maintenance of the project have the	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
potential to result in conflicts with some of the policies or regulations adopted by relevant federal, state, and regional (i.e., TRPA) agencies with jurisdiction over the project. However, APMs (see Chapter 3, Project Alternatives) are included as part of the project. Appendix G of this document contains an analysis of the consistency of the project with all applicable policies adopted for the purpose of avoiding or mitigating an environmental effect, and references specific APMs, impact analyses, and mitigation measures that would preclude any policy conflicts and reduce plan consistency impacts to less-than-significant levels.			
4.3 Forestry Resources			
4.3-1. Conflict with or cause rezoning of forest land, timberland, or timberland production zone (TPZ). Implementation of the action alternatives would not result in a conflict with existing Placer County forest land/timberland-related zoning or cause rezoning of forest land, timberland, or TPZ located in the project footprint (i.e., FOR, FOR-B-X-160 AC. MIN., RF-B-X 10 AC. MIN., and TPZ). Electric lines are allowed as proposed without land use permit approval under the Placer Zoning Ordinance.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.3-2. Conversion of forest land to non-forest uses or loss of forest land. Implementation of the action alternatives would result in the removal of between approximately 47,100 (Alt. 4) and 58,000 (Alt. 1) trees in up to 219.8 acres of forest land plus hazard tree border zones as part of project construction and long-term vegetation management in the power line ROW and in new access ways. Considering forest regeneration on land currently maintained in the existing 625 Line ROW, overall permanent forest land impact would be between 66.1 acres (Alt. 4) and 107.0 acres (Alt. 2). Tree removal would not result in substantial changes to adjacent stand structure or regional forest land composition or distribution. Forest land would not be lost or converted to a non-forest use as project-related activities are compatible uses with forest land zoning designations in the project area.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
4.3-3. Change in existing environment that could result in conversion of forest land to non-forest use. Project activities are compatible with Placer County zoning and do not result in zoning changes that could promote growth. Although the proposed project responds to growth planned/authorized by others, it does not itself promote development that could result in forest land conversion. Implementation of the action alternatives would not involve additional changes in the existing environment which, due to their location or nature, could temporarily or permanently result in conversion of forest land to a non-forest use.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.4 Scenic Resources			
4.4-1. Cause inconsistency with adopted plans. The Tahoe City Community Plan (1994) suggests relocation of the Tahoe City Substation to a specific site known as “the Chimneys” as a means of removing it from public view and thereby improving scenic quality. This action is also defined as Scenic Program Project #135 in the Scenic Quality Improvement Program. Although the Roadway Travel Unit was not in attainment of scenic thresholds at the time substation relocation was recommended, it is now in attainment and has been since 2006. The action alternatives propose to rebuild the Tahoe City Substation in its current location and screen the facility from public view.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.4-2. Create views of rebuilt power lines or other project components from sensitive locations. The existing 625 and 650 Lines would be rebuilt using larger poles that would be more conspicuous than the existing line in views from certain public recreation areas, bike trails, and scenic roadway corridors. Implementation of proposed APMs would minimize scenic effects during construction through specific screening and management practices; require use of specific materials, colors, and textures for project elements; and modify power pole and line placement such that views from sensitive locations and scenic resources would be	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
eliminated or minimized.			
4.4-3. Compliance with USFS Visual Quality Objectives. The 625 Line would be constructed within a new alignment on USFS lands within a ROW, and these areas would require new access. The visual effect of the newly cleared ROW, new access ways, and rebuilt power line would meet management goals for visual quality on USFS lands during construction and operation of the project.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.4-4. Result in adverse effects with respect to lighting or glare. The upgraded substations and conductors could introduce additional sources of lighting and glare that are more conspicuous than existing structures. Because substations would be rebuilt in the locations of existing substations (i.e., no new substations) and APMs would provide for: 1) use of non-specular conductor that is mechanically or chemically treated to reduce reflectivity, 2) use of non-reflective finishes on substation structures, and 3) screening of the rebuilt Tahoe City Substation through landscaping and other means, no substantial increase in lighting or glare is anticipated.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.5 Geology, Soils, Land Capability and Coverage			
4.5-1. Exposure of people or structures to seismic hazards. The study area is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone. However, several faults are located in the project area that could subject project components to ground shaking and ground failure. Structures proposed as part of the action alternatives would be designed and constructed in accordance with the current minimum seismic safety and structural design requirements set forth in the California Building Code. Therefore, there would be no substantial increased risk of loss, injury, or death or property damage from strong ground shaking alone.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.5-2. Potential for soil erosion or soil compaction. Installing and removing power line structures, constructing and/or upgrading substations, upgrading and establishing access ways, removal of	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
existing structures, and installation of new structures associated with the action alternatives could increase the potential for soil erosion due to vegetation removal, soil disturbance, and soil compaction. However, implementation of design features, proposed APMs, and permit conditions would reduce the potential for impact.			
4.5-3. Other soil hazards. Construction of the action alternatives could occur in expansive or unstable soils. Also, because of the variable and steep topography across the study area, construction of the action alternatives could create slope instability. Expansive soils can change in volume, causing damage to structures or foundations. The Natural Resource Conservation Service soil surveys indicate that some moderately expansive soils may exist in the study area. Also, because portions of the study area are located on sloping ground and installation of poles and access ways would require excavations, there is a potential for these activities to create slope instability. Because a geotechnical study of the project area would be completed and recommendations from a resulting Geotechnical Engineering Report (APM SOILS-2) would be implemented prior to construction, potentially expansive or unstable soils and slope instability would be identified and avoided, or mitigated through specialized construction methods.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.5-4. Loss of availability of a known mineral resource or locally important mineral resource recovery site. The existing 132/650 Line (Segment 650-6) crosses an important mineral resource area. The action alternatives would involve replacing the existing wood poles along this segment with steel poles. Construction would occur within the existing ROW and would not alter existing conditions regarding access to mineral resources in this area.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.5-5. Land coverage. Adequate allowable land coverage figures are available for all increases in coverage associated with the	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
action alternatives, in accordance with the TRPA land classification system and land coverage requirements. The applicant would secure the purchase or transfer of all required coverage and resolve any excess coverage mitigation requirements prior to groundbreaking and acknowledgement of the TRPA permit.			
4.6 Hydrology and Water Quality			
4.6-1. Violate any federal, state, regional, or TRPA water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality. Construction of the action alternatives would result in temporary soil disturbance along the upgraded utility alignment, new access ways and improved road sections, and staging areas. Soil disturbance associated with these construction activities could cause accelerated soil erosion and sediment loss that could be transported to nearby water bodies. Use of hazardous materials during construction (e.g., fuels, lubricants) could result in the release of these materials into nearby water bodies. Construction dewatering could also provide a mechanism for contaminant discharges. These short-term construction impacts would be avoided or minimized through adherence to various federal, state, and local laws, regulations, and programs which require implementation and continual monitoring and maintenance of best management practices (BMPs) to protect water quality during construction. Various measures included as part of the proposed project would further reduce the risk of water quality degradation.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.6-2. Increase the rate or amount of stormwater runoff so that it would exceed the capacity of existing or planned stormwater drainages, infiltration, and treatment systems or facilities resulting in increased sources of pollutants reaching surface waters or causing detrimental flooding to property or infrastructure. The action alternatives would include some increases in impervious surfaces associated with pole and	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
foundation installations and upgrading of two substations. Any increase in impervious surfaces associated with these activities would be relatively small and only a small portion would occur in areas currently served by existing or planned stormwater facilities. There is little potential to increase the amount or rate of stormwater runoff in locations served by drainage infrastructure in a manner that would exceed the capacity of those existing or planned stormwater facilities or cause detrimental flooding to property or infrastructure. In addition, all installations of the action alternatives would need to comply with stringent requirements for stormwater and erosion control contained in the Lahontan Water Quality Control Plan, the Lake Tahoe Total Maximum Daily Load Program, and existing National Pollutant Discharge Elimination System permits. Therefore, if adverse increases in runoff were possible in a particular area, compliance with these plans and programs would ensure that adverse effects were avoided.			
4.6-3. Substantially alter existing drainage patterns or alter the course or direction of any water body in a manner that may result in detrimental flooding to property or infrastructure or substantial erosion or siltation that may be carried to surface waters. Although some temporary access ways required for implementation of the action alternatives may cross creeks and drainages, the crossings would only be temporary and would be required under the National Pollutant Discharge Elimination System permits and stormwater pollution prevention plan to install and remove temporary bridges or adequate diversions that would maintain conveyance of anticipated flows without causing aggravated erosion or siltation within the waterway. A portion of the proposed access ways would occur in mountainous terrain resulting in steep grades that could intercept and redirect natural drainages or instigate accelerated erosion and rilling. Without adequate erosion control and drainage	S (Alts. 1-4)	<p>Mitigation Measure 4.6-3a (Alts. 1-4): Follow USFS Guidance on Locating and Designing Roads to Protect Water Quality and Incorporate Erosion Control BMPs for all New Access Ways or Improvements to Existing Roads. Avoid Constructing Access Ways Steeper than 15 Percent Gradient Where Feasible and When Required Implement Site-Specific Proven BMPs to Prevent Concentrated Runoff and Gullyng.</p> <p><i>During the project design process, the applicant shall follow USFS Guidance (USFS 2011) and coordinate directly with representatives of the LTMBU and Tahoe National Forest in their respective project areas to identify optimum siting, design and erosion control BMP type and placement for new access ways and modified access roads.</i></p> <p><i>USFS guidance on locating and designing roads to minimize problems and risks to water, aquatic, and riparian resources includes (USFS 2011) the following.</i></p>	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
designs these steeply inclined access ways (greater than 15 percent grade) could become a conduit for concentrated flow and substantial erosion.		<ul style="list-style-type: none"> › Fit the terrain, limit the need for excavation, and prevent damage to resources. › Avoid riparian areas, wetlands, meadows, overly steep slopes and unstable landforms to the extent practicable. › Use bridges or raised prisms with diffuse drainage to sustain flow patterns. › Set crossing bottoms at natural channel bed and wet meadow surfaces. › Balance cut and fills, consider full bench construction or mechanically stabilized fills on unstable slopes or slopes greater than 60 percent › Design road surfaces to dissipate intercepted water via outsloping, insloping with drains or crowning with drains › Reduce hydrologic connectivity of the road segment and limit connectivity to water crossings › Incorporate stormwater and erosion controls and properly spaced cross drains to disperse flows › Design stable ditch configurations and include energy dissipaters at culvert outlets <p>Designs will also include minimizing road sections with 15 percent or steeper gradients and outsloping and designing an adequate number of cross-drains. BMPs could include rolling dips, waterbars, rock-dissipaters, or other measures sufficient to meet USFS standards.</p> <p>Mitigation Measure 4.6-3b (Alts. 1-4): Incorporate into Annual Power Line Inspection and Maintenance Routines a Permanent ROW and Access Way/Road Inspection and Maintenance Program.</p> <p>Include observations and recordings of any aggravated compaction or erosion along the ROW and access ways/roads into the annual power line inspections. Note any evidence of rilling, gullying, rutting, or drainage capture along the ROW and access ways. Make repairs and implement measures in line with the USFS Guidance on</p>	

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<i>Locating and Designing Roads to Protect Water Quality to reduce or eliminate any erosion issues including limiting public access via gates, plantings, or signage; minimizing compaction; interrupting, distributing and attenuating peak flows through rolling dips; check dams, and preventing road capture of drainages via culverts, fords crossings and other mechanisms.</i>	
4.6-4. Place structures within a 100-year flood hazard area that would impede or redirect flood flows. There are two locations where the action alternatives would place facilities within a 100-year flood hazard area. Given the small footprint of the proposed facilities, placement of poles in the flood hazard area would not appreciably impede or redirect flood flows.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.6-5. Intercept or alter the direction or rate of flow of groundwater or degrade groundwater quality. The action alternatives involve the subsurface installation of steel poles and self-supporting poles with concrete foundations that have the potential to intercept groundwater flows. Given the small diameter and large spacing of the single poles, it is unlikely that they would have an impact to groundwater direction or rate of flow; however the temporary interception of groundwater during pole excavation and dewatering activities could create the potential to introduce contaminants.	S (Alts. 1-4)	Mitigation Measure 4.6-5 (Alts. 1-4): Prepare and Implement a Dewatering and Discharge Plan. <i>A dewatering and discharge plan shall be developed, submitted to TRPA and the LRWQCB for approval and implemented prior to initiating any excavation activities to protect groundwater resources in addition to surface waters in the event that groundwater is intercepted during project activities. The dewatering and discharge plan shall provide methods to protect groundwater during excavations from potential contaminant releases during equipment use and refueling, such as specific spill control and clean up and response measures in the vicinity of excavations. Additionally the dewatering and discharge plan shall include methods to collect and treat the sediment-laden water prior to releasing directly to a surface or groundwater source or demonstrate that it can be used to irrigate or applied as dust control without short-circuiting directly to surface waters.</i>	LTS (Alts. 1-4)
4.7 Biological Resources			
4.7-1. Disturbance or loss of common vegetation communities and wildlife habitats. Implementing the action alternatives would result in the removal or disturbance of up to 157 acres of common	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
vegetation communities and habitats, including Sierran mixed conifer forest, red fir forest, Jeffrey pine forest, and montane chaparral. Because these habitats are locally and regionally common and abundant, and implementation of APMs would minimize vegetation removal and require that habitat is restored to pre-project conditions in temporary construction areas, the action alternatives would not substantially reduce the size, continuity, or integrity of any common vegetation community or habitat type.			
4.7-2. Disturbance or loss of sensitive habitats (jurisdictional wetlands, riparian vegetation, and SEZ). Implementing the action alternatives would result in direct removal and disturbance of sensitive habitats, including waters of the United States, waters of the state, riparian habitat, and SEZs.	S (Alts. 1-4)	<p>Mitigation Measure 4.7-2a (Alts. 1-4): Compensate for Unavoidable Loss of Stream and Riparian Habitat. <i>The following measures would be implemented to avoid or compensate for the loss or degradation of stream or riparian habitat, ensure consistency with Fish and Game Code Section 1602, and further reduce potential adverse effects on riparian habitats:</i></p> <ul style="list-style-type: none"> › CalPeco shall compensate for permanent riparian habitat impacts at a minimum of a 1:1 ratio through contributions to a CDFW approved wetland mitigation bank or through the development and implementation of a Compensatory Stream and Riparian Mitigation and Monitoring Plan aimed at creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code. › The Compensatory Stream and Riparian Mitigation and Monitoring Plan shall include the following: 	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<ul style="list-style-type: none"> ○ <i>identification of compensatory mitigation sites and criteria for selecting these mitigation sites;</i> ○ <i>in kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;</i> ○ <i>monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.);</i> ○ <i>ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80 percent survivorship is achieved;</i> ○ <i>corrective measures if performance standards are not met;</i> ○ <i>responsible parties for monitoring and preparing reports; and</i> ○ <i>responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.</i> <p>Mitigation Measure 4.7-2b (Alts. 1-4): Compensate for Unavoidable Loss of SEZ.</p> <p><i>The following measures would be implemented to ensure consistency with TRPA Code Section 61.3 and Fish and Game Code Section 1602 and further reduce potential adverse effects on SEZs, streams, and riparian habitat:</i></p> <p><i>› Within the Tahoe Basin, all reasonable alternatives, including</i></p>	

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<p><i>bridge spans, pole spans, and facility relocation; shall be implemented to avoid or reduce the extent of encroachment into SEZs.</i></p> <p>› <i>In instances where there is no feasible alternative to avoid an SEZ, CalPeco shall mitigate all impacts within the boundaries of SEZs by restoring SEZ habitat (land capability district 1b) in the surrounding area, or other appropriate area as determined by TRPA, at a minimum ratio of 1.5:1, consistent with TRPA Code.</i></p> <p>› <i>CalPeco shall retain a qualified restoration ecologist to prepare a restoration plan (see APM BIO-36) that will address final clean-up, stabilization, and revegetation procedures for areas disturbed by the project. The restoration plan for SEZs shall include the following:</i></p> <ul style="list-style-type: none"> ○ <i>identification of compensatory mitigation sites and criteria for selecting these mitigation sites;</i> ○ <i>complete assessment of the existing biological resources in the restoration areas;</i> ○ <i>in kind reference habitats for comparison with compensatory SEZs (using performance and success criteria) to document success;</i> ○ <i>monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.);</i> ○ <i>ecological performance standards, based on the best available science and including specifications for native plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted vegetation by the end of the five-year maintenance and monitoring period or dead and dying plants shall be replaced and monitoring continued</i> 	

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<p><i>until 80 percent survivorship is achieved;</i></p> <ul style="list-style-type: none"> <i>corrective measures if performance standards are not met;</i> <i>responsible parties for monitoring and preparing reports; and</i> <i>responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.</i> 	
4.7-3. Disturbance or loss of special-status plants. Implementing the action alternatives would result in direct removal and disturbance of <i>Plumas ivesia</i> and habitat that could be occupied by other special-status plant species. Special-status plants that are not directly removed or physically damaged could be adversely affected by habitat modification or degradation. APMs included in the project design would minimize, and in some instances, avoid potential adverse effects on special-status plants. Through implementation of APMs, the action alternatives would not substantially affect the abundance or distribution of any special-status species (either directly or through habitat modifications).	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.7-4. Tree removal and loss of late seral/old growth forest. Implementing the action alternatives would result in substantial tree removal, as defined by TRPA, and could result in the loss of late seral/old growth forest stands, which could interfere with attainment of late seral/old growth forest threshold standards.	S (Alts. 1-4)	<p>Mitigation Measure 4.7-4 (Alts. 1-4): Conduct a Tree Survey; Avoid Late Seral/Old-Growth Forest; Compensate for Loss of Trees.</p> <p><i>A Registered Professional Forester (RPF) shall conduct a focused tree survey to identify, map, and tabulate the number of trees in each relevant size class (6 inches or greater on non-Federal lands in Placer County, greater than 14 inches within the jurisdiction of TRPA, greater than 24 inches eastside, greater than 30 inches westside) that would be removed as a result of the project. Following completion of the focused tree survey, a timber harvest/tree removal plan shall be prepared by a RPF. The plan shall include applicable APMs and additional necessary prescriptions for tree removal, water quality protection, protection of preserved trees, slash disposal, fire protection, and tree replacement. The plan shall contain all information required to be in a tree information report under the Placer County tree ordinance, for obtaining a tree</i></p>	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<p><i>removal permit. The plan shall comply with the minimum standards for tree removal, as described under TRPA Code 61.1.6 and with CAL FIRE timber harvesting plan standards, as applicable, under the Forest Practice Act. Before implementing any project activities that involve tree removal, the timber harvest plan shall be submitted to CAL FIRE for review and approval. Once approved, the plan shall be incorporated into the project design and all conditions of approval shall be implemented. CalPeco shall obtain a tree removal permit from TRPA for tree removal within the Lake Tahoe Basin.</i></p> <p><i>For construction on non-Federal lands within Placer County, CalPeco will implement APM BIO-36 and APM BIO-37 to restore vegetation disturbed by the project and offset the loss of trees in the new 625 Line; however, this may not be sufficient to fully offset the loss of trees resulting from project implementation. If it is determined that the loss of trees protected under County ordinance cannot be fully offset through implementation of APM BIO-37, CalPeco shall either replace trees at an offsite location or contribute to the County's Tree Preservation Fund; as determined in coordination with the County and in accordance with the Placer County Tree Ordinance (12.16.080 Replacement program and penalties). Before Improvement Plans are approved, the applicant shall provide proof to the County that one, or a combination, of the mitigation options described above has been completed and/or funded. Proof of mitigation fulfillment will also be provided to CDFW.</i></p> <p><i>CalPeco shall avoid loss of old growth forest to the extent feasible. If loss of late seral/old growth forest is unavoidable, CalPeco shall compensate for the loss of late seral/old growth forest through the development and implementation of a forest management plan, prepared by a RPF, to facilitate establishment of late seral/old growth forest stands and enhance existing late seral/old growth forest stands. The forest management plan shall include management actions, such as fuels and vegetation treatments, to facilitate and enhance old-growth development within the existing</i></p>	

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<i>625 Line to be removed and/or other potential treatment areas. The forest management plan shall clearly describe how the project shall achieve TRPA threshold standards for late seral/old growth forest enhancement, identify priority locations where enhancement actions could be implemented to achieve the plan's objectives, and include a funding component for late seral/old growth forest enhancement projects. The forest management plan shall be approved by TRPA before removal of any forest stands identified as late seral/old growth forest.</i>	
4.7-5. Introduction and spread of invasive weeds. Project construction could result in the introduction or spread of invasive plant species through seed mixes, equipment, and other materials. Areas disturbed during construction can provide ideal conditions for weed establishment.	PS (Alts. 1-4)	<p>Mitigation Measure 4.7-5 (Alts. 1-4): Utilize Local Native Seed and Notify Noxious Weed Coordinator.</p> <p><i>CalPeco shall utilize locally collected native seed sources for revegetation when possible. Plant and seed material shall be collected from or near the project area, from within the same watershed, and at a similar elevation when possible and with approval of the USFS botanist. Persistent nonnatives such as cultivated timothy (Phleum pretense), orchard grass (Dactylis glomerata), or ryegrass (Lolium spp.) shall not be used.</i></p> <p><i>After the project is completed, the USFS noxious weed coordinator shall be notified so that the project area can be monitored by the USFS if desired. Monitoring could be for up to three years (as funding allows) subsequent to project implementation to ensure additional nonnative invasive species do not become established in the areas affected by the project and to ensure that known nonnative invasive species do not spread.</i></p>	LTS (Alts. 1-4)
4.7-6. Disturbance or loss of special-status wildlife species and habitats. Implementation of the action alternatives could disturb the foraging and movement patterns of individuals, affect breeding activities and reproductive success, cause direct mortality, and disturb or remove suitable habitat for special-status wildlife species. With implementation of APMs to avoid, minimize, and compensate for impacts to wildlife resources generally and several special-status species specifically, the action alternatives	S (Alts. 1,2) LTS (Alts. 3, 4)	No feasible mitigation has been identified.	SU (Alts. 1-4) LTS (Alts. 3, 4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
are not expected to substantially affect the distribution, breeding productivity, viability, or the regional population of any special-status species. However, vegetation removal under Alternative 1 (PEA Alternative) and Alternative 2 (Modified Alternative) would result in permanent habitat loss within TRPA-designated disturbance zones around northern goshawk nests, which is prohibited by TRPA.			
4.7-7. Effects on aquatic habitat. Construction activities such as vegetation clearing, pole installation, pole removal, creation of access ways, and staging near aquatic habitats could temporarily result in adverse impacts to aquatic habitat, including through removal of riparian vegetation; accidental spill and contamination from construction chemicals, fuels, or other hazardous materials; increased erosion, downstream sedimentation, and turbidity; small amounts of fill placed in aquatic habitats; and direct mortality or injury of fish and other aquatic species caused by equipment passing through aquatic habitats. The project's design, construction methods, and incorporation of several APMs designed to protect aquatic resources would minimize, avoid, and partially compensate for these potential impacts to aquatic habitats. However, even with integration of the APMs into project design, project construction could result in loss or degradation of stream or riparian habitat protected under Section 1602 of the Fish and Game Code. Any unavoidable disturbance to the bed and bank of a waterway that provides habitat functions would require a Streambed Alteration Agreement from the California Department of Fish and Wildlife.	PS (Alts. 1-4)	<p>Mitigation Measure 4.7-2a (Alts. 1-4): Compensate for Unavoidable Loss of Stream and Riparian Habitat. <i>The following measures would be implemented to avoid or compensate for the loss or degradation of stream or riparian habitat, ensure consistency with Fish and Game Code Section 1602, and further reduce potential adverse effects on riparian habitats:</i></p> <ul style="list-style-type: none"> › CalPeco shall compensate for permanent riparian habitat impacts at a minimum of a 1:1 ratio through contributions to a CDFW approved wetland mitigation bank or through the development and implementation of a Compensatory Stream and Riparian Mitigation and Monitoring Plan aimed at creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams in the project site and surrounding areas. Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement as required under Section 1602 of the Fish and Game Code. › The Compensatory Stream and Riparian Mitigation and Monitoring Plan shall include the following: 	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<ul style="list-style-type: none"> ○ <i>identification of compensatory mitigation sites and criteria for selecting these mitigation sites;</i> ○ <i>in kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;</i> ○ <i>monitoring protocol, including schedule and annual report requirements (Compensatory habitat shall be monitored for a minimum of five years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer.);</i> ○ <i>ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80 percent survivorship is achieved;</i> ○ <i>corrective measures if performance standards are not met;</i> ○ <i>responsible parties for monitoring and preparing reports; and</i> ○ <i>responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.</i> 	
4.7-8. Effects on wildlife and fish movement corridors. Known animal movement corridors in the study area include the migratory route of the Loyalton-Truckee mule deer herd and streams that function as migratory and movement routes for fish. Construction activities could cause temporary disturbances to mule deer, fish movements and habitat use. However, the project would not create local, watershed-, or landscape-level barriers	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
that would impair movement, redirect migration, or prevent the use of traditional habitats throughout a species range.			
4.7-9. Loss of habitat for USFS management indicator species. Implementation of the action alternatives could affect habitat for nine USFS Management Indicator Species (MIS). With integration of APMs into project design to minimize, avoid, and compensate for impacts to biological resources, the project would not result in a substantial loss of habitat for any MIS, alter existing trends in any MIS habitat, or lead to a change in distribution of an MIS across the Sierra Nevada bioregion.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.8 Recreation			
4.8-1. Result in a substantial decrease or loss of public access to any lake, waterway, or public lands. Construction would require temporary trail closures and access restrictions in some portions of the project area during the spring and summer, including on public lands used for recreation, to ensure public safety. Construction activities would not occur in winter months and would not affect winter recreation activities in the project area. Temporary closures may also be necessary on an infrequent basis during project operation for facility maintenance. The applicant has committed to avoidance of construction during known, permitted recreation events in the project area; advance notification of all construction activities to the public, USFS, and other agencies with jurisdiction over project area lands; and provision of adequate signage and alternate routes for any longer term closures, estimated to be up to one day in any given location. Construction is projected to occur in such a manner that closures would be short-term and of limited duration while numerous other facilities and trails in the region would remain open for use.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.8-2. Diminish quality of recreation experience. Construction would require use of passenger and construction vehicles and equipment, including haul trucks, mowers, excavators, front-end	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
loaders, chain saws, chippers, and helicopters. Such activity has the potential to create air emissions, dust, noise, objectionable odors, and visual impacts that could diminish the quality of the recreation experience for users in the vicinity. Permanent project elements (e.g., steel poles, conductor, new and expanded access ways, vegetation management areas) would also be visible in portions of the project area used for recreation and could contribute to diminished quality of recreation experience. As elements of the project, the applicant has committed to implement APMs relative to recreation, scenic, noise, and air quality to reduce or avoid potential adverse impacts in these areas. Construction activities would be temporary, limited to smaller areas of active construction at any given time, and would implement APMs in a variety of technical areas.			
4.8-3. Adverse effects associated with new or expanded recreation facilities. The project does not propose new recreation facilities or require the construction or expansion of recreation facilities. The new access ways would not be designated or intended for use as recreational facilities and barriers to access by motorized recreational vehicles would be placed at the entrance to the access ways. However, due to unrestricted public access on USFS land, it is possible that unsanctioned use of the access ways for hiking or skiing could occur. Such use would likely be opportunistic and therefore limited in numbers, and signage and barriers would be in place to discourage unauthorized use.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.9 Heritage, Cultural, and Paleontological Resources			
4.9-1. Damage to or destruction of documented significant heritage and cultural resources. The area of potential effect (APE) for the action alternatives contains between nine (Alternative 3) 17 (Alternative 1) documented heritage and cultural resources recommended or considered eligible for listing in the National Register of Historic Places or California Register of Historical Resources. Construction of the action alternatives could result in a	PS (Alts. 1-4)	No feasible mitigation has been identified.	SU (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
substantial adverse change in the significance of one or more of these resources.			
4.9-2. Damage to or destruction of undocumented significant heritage and cultural resources. Most of the APE has been intensively surveyed for heritage and cultural resources. However, there are portions of the APE where surveys have not yet been completed. In areas that have been surveyed, there also remains a potential for unanticipated, previously unidentified subsurface resources to be discovered during construction. Newly discovered heritage and cultural resources could be eligible for listing in the National Register of Historic Places or California Register of Historical Resources and could be adversely affected during project construction.	PS (Alts. 1-4)	No feasible mitigation has been identified.	SU (Alts. 1-4)
4.9-3. Unanticipated discovery of human remains during construction. One historic cemetery is located within the APE for the existing and proposed 650 Line. Although there is a low potential for human remains to be discovered during ground disturbance for the project, construction activities would have the potential to disturb human remains, including those interred outside of formal cemeteries.	PS (Alts. 1-4)	No feasible mitigation has been identified.	SU (Alts. 1-4)
4.9-4. Discovery of paleontological resources during construction. Due to the known presence of paleontological resources in the region, construction activities in the Mehrten Formation geologic unit have the potential to disturb or destroy newly discovered paleontological resources. However, implementation APMs would prevent substantial damage to important paleontological resources.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.10 Hazards and Hazardous Materials			
4.10-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction and ongoing operations would require the use of certain materials such as fuels, oils, solvents,	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
and other chemical products that, in larger quantities, could pose a potential hazard to the public or the environment if improperly used or inadvertently released. During operations of the project, the potential would exist that a transformer could fail, resulting in a spill of mineral oil. However, use of hazardous materials at the site for construction, operation, and maintenance would be in compliance with multiple federal, state, and local regulations, including federal regulations as outlined in Title 40 Code of Federal Regulations Part 112, which require implementation of a Spill Prevention, Control, and Countermeasure Plan.			
4.10-2. Create a significant hazard to the public as a result of blasting activities. Blasting could be conducted as part of project construction to remove or break up rock outcrops. If not conducted properly, blasting could create a hazard to construction personnel and the public.	PS (Alts. 1-4)	Mitigation Measure 4.10-2 (Alts. 1-4): Implement Blasting Safety Measures. <i>If blasting is required as part of project construction, CalPeco shall hire a blasting contractor licensed by the Federal Bureau of Alcohol, Tobacco, and Firearms and who possesses all other necessary licenses and certifications applicable to blasting in the project area. Prior to construction activities that require the use of explosives, the blasting contractor shall prepare and submit a Blasting Safety Plan (or similar document as required) to the Placer County Engineering and Surveying Division and the local fire protection district or department in which the blasting activity will take place. The plan shall, at a minimum, address the following.</i> <ul style="list-style-type: none"> › Evidence of licensing as required by the US Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives, experience, and qualifications of all members of the blasting team. › Pre-blast notifications to the local fire department, residents, landowners, land management agencies, utilities, and others potentially affected by blasting operations. › The means for safe transportation and on-site storage and security of explosives in accordance with local, state and federal regulations. › The minimum acceptable weather conditions for blasting. › Minimum clearance distances between blasting and nearby land 	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<p>uses.</p> <ul style="list-style-type: none"> › Traffic control standards and traffic safety measures (if applicable). › Requirement for provision and use of personal protective equipment. › Minimum standoff distances and description of blast impact zones and procedures for clearing and controlling access to the impact zones. › Procedures for handling, setting, wiring, and firing explosives. Also, procedures for handling misfires per federal code. › Type and quantity of explosives and description of detonation device. Sequence and schedule of blasting rounds, including general method of excavation, lift heights, etc. › Methods of matting or covering of blast area to prevent flyrock and excessive air blast pressure (where applicable). › Dust control measures in compliance with applicable air pollution control regulations (to interface with general construction dust control plan). › Emergency Action Plan to provide emergency telephone numbers and directions to medical facilities. Procedures for action in the event of injury. › Storage of and access to Material Safety Data Sheets for each explosive or other hazardous materials to be used. › Description of the insurance for the blasting work. 	
4.10-3. Potential human health hazards from exposure to existing on-site hazardous materials. Construction could expose workers and the public to hazardous materials currently in the construction zone, and hazardous materials currently onsite could create environmental health hazards if left in place.	PS (Alts. 1-4)	<p>Mitigation Measure 4.10-3 (Alts. 1-4): Prepare and Implement a Hazardous Materials Contingency Plan.</p> <p>A hazardous materials contingency plan shall be prepared that describes the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify evidence that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, presence of USTs, or buried building material. The plan shall include</p>	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<i>measures to protect worker safety if signs of contamination are encountered (e.g., stopping work in the vicinity of the potential contamination), identify sampling and analysis protocols for various substances that might be encountered (e.g., volatile organic compounds, hydrocarbons, heavy metals), and list required regulatory agency contacts if contamination is found. The plan shall also identify legal and regulatory processes and thresholds for cleanup of contamination. The project applicant shall retain the services of a qualified environmental contractor to prepare the contingency plan. The plan, and obligations to abide by and implement the plan, shall be incorporated into the construction and contract specifications of the project. The requirements of the plan shall be incorporated in the APM and work practices training that would be implemented as part of APM HAZ-1.</i>	
4.10-4. Produce hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Construction and ongoing operations would require the use of certain materials such as fuels, oils, solvents, and other chemical products that, in larger quantities, could pose a potential hazard to the public or the environment if improperly used or inadvertently released. Six schools are located within 0.25 mile of the project. However, use of hazardous materials at the site would be in compliance with federal, state, and local regulations.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.10-5. Conflict with an airport land use plan and potentially generate a safety hazard for people residing or working in the project area. Helicopters would be used for construction, but must follow Federal Aviation Administration regulatory requirements that would prevent conflicts with the Truckee Tahoe Airport Land Use Compatibility Plan (ALUCP) and generation of safety hazards. Under Alternative 1 (PEA Alternative), Alternative 2 (Modified Alternative), and Alternative 4 (Proposed Alternative), portions of	PS (Alts. 1-4)	Mitigation Measure 4.10-5 (Alts. 1-4): Power Line Shall be Installed in Compliance with Height Requirements Approved by the Foothill Airport Land Use Commission. <i>If, as part of ALUC height review, any proposed power poles are classified as a hazard to flight by the ALUC, the pole heights shall be adjusted to conform with ALUC height requirements, as long as heights do not violate design and safety standards. Minor route adjustments within the existing 200-foot wide resource survey corridor may also be considered to assist in meeting height</i>	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
Segments 650-3 through 650-7 would be located in ALUCP Compatibility Zones C, D, and E, and in Height Review Overlay Zones. Most new, taller power poles would replace existing poles; no new poles would be placed within different or more sensitive Compatibility Zones. Portions of Segments 650-3 through 650-7 under Alternative 3 (Road Focused Alternative) occur in ALUCP Compatibility Zones B1, C, D, and E, and in Height Review Overlay Zones. New poles in Segment 650-4B would be placed within a more sensitive Compatibility Zone. Depending on site specific conditions, such as proximity to the runway and topography at the pole site, installing power poles that are taller than the existing poles could generate a safety hazard for aircraft entering or leaving the runways, which could also present a hazard to people residing or working in the project area.		<i>requirements. If a sufficient height reduction cannot be achieved, the power line in this area shall be installed underground.</i>	
4.10-6. Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. Construction would create temporary construction-related traffic on local roadways and would require temporary lane/shoulder closures in work zones, resulting in traffic delays that could impair implementation of an emergency response plan or emergency evacuation plan. However, implementation of APMs would reduce the potential for conflicts with implementation of emergency response plans and allow evacuation plans to be implemented if necessary.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.10-7. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The amount of human activity in the project area would increase during the construction period. The increase in human presence during fire season could result in an increased risk of fire. However, with integration of APMs as a part of project design that require the implementation of a Construction Fire Prevention and Suppression Plan and include other measures to minimize fire risk, project effects would be less than significant.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
4.11 Public Services and Utilities			
4.11-1. Create the need for new or physically altered government facilities to maintain adequate law enforcement response times. During construction, potential theft and vandalism at construction sites may increase demand for law enforcement services. However, it is standard practice for contractors to provide nighttime lighting for security at staging and material storage areas, and to employ security staff if needed. Therefore, no substantial increase in demand for law enforcement would occur during construction that would alter government services or create the need for additional government facilities that could cause significant impacts. Operations and maintenance of the upgraded lines would not generate a demand for law enforcement services appreciably different from existing conditions.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.11-2. Create the need for new or physically altered governmental facilities to maintain adequate fire protection response times. During construction, there would be a temporary increase in fire risk as a result of construction activities, which have the potential to ignite dry vegetation. A fire protection plan would be in place and a water truck would be available at all construction sites. Therefore, no substantial increase in demand for fire protection services would occur during construction that would alter government services or create the need for additional government facilities. Operations and maintenance of the upgraded lines would not result in increased demand for fire protection services, and because line access and monitoring ability would be improved in its new location, demand could be less.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.11-3. Create a water supply demand in excess of existing entitlements and resources. Water would be required during the construction period for dust abatement and fire suppression. Water would be obtained from existing hydrants in public ROW or trucked into areas not served by public water lines. During the	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
operations and maintenance phase, demand for water would be the same as under existing conditions. Overall project water demand would be minor relative to existing available supplies.			
4.11-4. Exceed the capacity of a solid waste disposal facility. The action alternatives would generate solid waste during the construction phase. Some waste would be reused or recycled, while other waste would be taken to a landfill, and treated wood poles and other hazardous wastes would be transported to an approved facility, such as the US Ecology Nevada, Inc. treatment and disposal facility in Beatty, Nevada. Lockwood Regional Landfill has adequate capacity to accept construction waste generated by the project. There are numerous facilities available that can accept hazardous waste.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.11-5. Increase the risk of structural failure of, or substantially interfere with service from, existing utilities. Construction activities involving excavation and grading could potentially damage existing underground utilities, including pipelines for natural gas, water, and wastewater. Electrical service disruptions may also occur as lines are moved and replaced. Transfer of co-located utilities to new poles may result in temporary disruption of cable and telecommunication services.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.12 Traffic and Transportation			
4.12-1. Create an adverse effect on existing transportation systems including highway, transit, bicycle, or pedestrian facilities. Temporary, construction-related traffic would be generated on the road network in the project area and temporary lane/shoulder closures in work zones would be required. Construction period impacts could result in a temporary disruption to various modes of surface travel (i.e., transit, automobile, truck, bicycle, and pedestrian); however, implementation of APMs would prevent and minimize adverse effects on the performance of these systems.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
4.12-2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures or generate 100 or more new daily vehicle trip ends (DVTE) in the Lake Tahoe Basin. Construction would temporarily add traffic to the area roadway network. The amount of additional temporary traffic may exceed 100 new DVTE in the Lake Tahoe Basin during construction; however, these DVTE would be generated on a short term and temporary basis, and would be spread over different locations and times of day. The existing roadway network in the overall project area is expected to have adequate capacity to accept the temporary, localized increases in DVTE due to construction of the project components.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.12-3. Increased motor vehicle, bicyclist, and pedestrian traffic hazards. Construction could create temporary increases in traffic hazards on the road network in the project area as a result of temporary lane/shoulder closures and construction-related traffic in work zones. The construction period traffic hazards could affect all modes of surface travel (i.e., transit, automobile, truck, bicycle, and pedestrian); however, implementation of a traffic control plan and other measures included as part of the project would reduce potential hazards.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.12-4. Result in changes to existing parking facilities, or demand for new parking. Construction would necessitate parking vehicles and construction equipment throughout the project footprint, but would not require changes to existing parking facilities or create a demand for new permanent parking facilities.	NI (Alts. 1-4)	No mitigation is required for any of the alternatives.	NI (Alts. 1-4)
4.12-5. Result in the alteration of air traffic patterns. The proposed project could result in a temporary increase in air traffic at the Truckee Tahoe Airport if helicopter flights during construction utilize airport facilities. Helicopter use must comply with applicable Federal Aviation Administration regulations and airport operation requirements. Project construction would be unlikely to result in the alteration of air traffic patterns, and would	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
not result in any alterations that would result in a substantial safety risk.			
4.12-6. Result in inadequate emergency access. Construction would create temporary construction-related traffic on the road network in the project area and would require temporary lane/shoulder closures in work zones resulting in traffic delays that may affect emergency access. However, through implementation of a traffic control plan and other measures included as part of the project, project effects on the roadway network would not have a substantial adverse effect on emergency access.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.13 Air Quality and Climate Change			
4.13-1. Daily construction-generated emissions of reactive organic gases, oxides of nitrogen (NO_x), respirable and fine particulate matter less than 10 microns and 2.5 microns in diameter (PM₁₀ and PM_{2.5}), and carbon monoxide (CO). Construction-generated emissions in Placer County would exceed Placer County Air Pollution Control District (PCAPCD) significance thresholds for NO _x and PM ₁₀ . Construction-generated emissions in Nevada County would exceed Northern Sierra Air Quality Management District significance thresholds for NO _x . Construction activity would also generate substantial levels of PM _{2.5} . Implementation of the action alternatives would generate emissions that contribute to nonattainment status of ozone, PM ₁₀ and PM _{2.5} in the Mountain Counties Air Basin and the nonattainment status of PM ₁₀ in the Lake Tahoe Air Basin.	S (Alts. 1-4)	Mitigation Measure 4.13-1a (Alts. 1-4): Develop and Implement a Construction Equipment Exhaust Emissions Control Plan. <i>The applicant shall provide separate plans, for approval by PCAPCD and NSAQMD, demonstrating that the heavy-duty (50 horsepower [hp] or more) land-based, off-road vehicles to be used for project-related demolition and construction activity in their respective jurisdictions, including owned, leased, and subcontractor equipment, shall achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most current ARB fleet average that exists at the time of construction. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The applicant shall submit to PCAPCD and NSAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 hp, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventories shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventories</i>	SU (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<p><i>shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs in the respective air district. At least 48 hours before the use of heavy duty off-road equipment, the applicant shall provide the respective air district with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The applicant shall use Sacramento Metropolitan Air Quality Management District's Construction Mitigation Calculator (SMAQMD 2012), which is approved by PCAPCD and NSAQMD, to identify an equipment fleet that achieves this reduction.</i></p> <p><i>This measure does not apply to the use of a helicopter during construction activity because there are no state or federal emissions standards for helicopters and, therefore, no established set of state-wide emission rates. Also, the availability of a more emissions-efficient helicopter suitable for the project is unknown.</i></p> <p>Mitigation Measure 4.13-1b (Alts. 1-4): Pay Off-Site Mitigation Fee to PCAPCD to Off-Set NO_x Emissions Generated by Construction Activity in Placer County.</p> <p><i>The applicant shall pay an off-site mitigation fee into PCAPCD's Clean Air Grants Program for the purpose of reducing NO_x emitted by project construction activities in Placer County to a less-than-significant level (i.e., less than 82 lb/day). The applicant shall provide a detailed construction schedule to PCAPCD before each construction season (i.e., May through October) that identifies when construction activities at different portions of the project site in Placer County may occur. The applicant shall calculate the fees associated with each construction phase in consultation with PCAPCD staff and the applicant shall pay the specific fee amounts to PCAPCD before each construction phase. The calculation of daily NO_x emissions shall be based on the cost rate established by PCAPCD's Clean Air Grants Program at the time each calculation and payment is made. PCAPCD's Clean Air Grants Program is part of ARB's statewide Carl</i></p>	

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
		<i>Moyer Memorial Air Quality Standards Attainment Program. The program provides grant funding for cleaner-than-required engines and equipment. Grants are administered by PCAPCD to support reductions in emissions of key pollutants which are necessary to meet clean air commitments under regulatory requirements. Eligible projects include cleaner on-road, off-road, locomotive, lawn & garden, light duty passenger vehicles being scrapped and agricultural equipment (ARB 2012; PCAPCD 2012). At the time of writing this EIS/EIS/EIR the cost rate is \$17,080 to reduce 1 ton of NO_x (ARB 2011; Kuklo, pers. comm., 2013).</i>	
4.13-2. Contribution of ozone precursors to the Sacramento Federal Ozone Nonattainment Area. Construction-generated emissions of ozone precursors (i.e., reactive organic gases and NO _x) in the Sacramento Federal Ozone Nonattainment Area would not exceed the <i>de minimis</i> levels. Therefore, the General Conformity would not apply to the proposed project.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.13-3. Exposure of sensitive receptors to toxic air contaminants (TACs). Some TAC-emitting construction activities would be located approximately 50 feet from existing sensitive receptors that are located adjacent to the power line ROW; however, exposure to sensitive receptors from construction-generated TACs would not be substantial because the duration of construction activity at any one location would be limited. Short-term construction and long-term operation of the proposed project would not result in the exposure of sensitive receptors to substantial TAC concentrations.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.13-4. Exposure of sensitive receptors to odors. The type of proposed land use is not commonly considered a source of odors. While construction of the proposed project could result in temporary emissions of odorous diesel exhaust, it is not anticipated that this release would be excessive, nor would it affect a substantial number of receptors.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures

Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
4.13-5. Greenhouse gas (GHG) emissions. GHG emissions associated with the proposed project would result in less-than-cumulatively considerable GHG emissions and would have a less-than-significant impact on climate change.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.13-6. Impacts of climate change on the project. Climate change is expected to result in a variety of effects in the project area, including changes to timing and intensity of precipitation resulting in increased risk of landslides associated with ground saturation and increased stormwater runoff. Climate change could also result in increased temperatures, leading to increased wildland fire in the project vicinity. However, there are numerous programs and policies in place to protect against and respond to wildland fire. Moreover, implementation of the proposed project would increase the North Lake Tahoe Transmission System's resilience to disturbance.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.14 Noise			
4.14-1. Short-term construction noise impacts. Existing noise-sensitive receptors are located in close proximity to proposed construction areas. However, most construction activities would be limited to the less noise-sensitive hours of the day, as permitted by each local jurisdiction. Helicopters would be used for certain construction activities and could exceed noise standards of applicable local jurisdictions if used during the more sensitive times of the day as defined by each jurisdiction. Further, construction activity would be required at night in order to install power lines across I-80, as well as for other activities such as delivery of substation transformers, filling of substation transformers, system transfers, and pouring of foundations. Helicopter use or construction during the more sensitive times of the day could result in temporary increases in construction noise at nearby sensitive receptors (e.g., residences approximately 250 feet to the south of I-80 in the Town of Truckee) and exceed local	S (Alts. 1-4)	Mitigation Measure 4.14-1 (Alts. 1-4): Potential Construction Activities Outside Allowable Timeframes. <i>For all construction activity that is to take place outside of allowable timeframes (typically nighttime construction) within 700 feet of any sensitive land use (e.g., houses, schools, churches, hospitals), the construction contractor shall ensure that noise levels at the nearest sensitive receptors do not exceed 45 dBA L_{eq} in Placer County, 50 dBA L_{eq} in the Town of Truckee, and applicable CNEL standards for TRPA PASS as shown in Table 4.14-3. To achieve compliance with these standards, the applicant shall:</i> <ul style="list-style-type: none"> › <i>Install temporary noise curtains that meet the following parameters:</i> <ul style="list-style-type: none"> ○ <i>Install temporary noise curtains as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s).</i> ○ <i>Temporary noise curtains shall consist of durable, flexible</i> 	LTS (Alts. 1-4)

Table ES-2 Summary of Resource Topics/Impacts and Mitigation Measures			
Resource Topics/Impacts	Level of Significance before Mitigation (by Alternative)	Mitigation Measures	Level of Significance after Mitigation (by Alternative)
nighttime noise standards.		<i>composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot.</i>	
4.14-2. Short-term construction vibration impacts. Existing noise-sensitive receptors are located in close proximity to proposed construction areas (e.g., residences in the Kings Beach area and Town of Truckee). Blasting could be required if a rock outcropping were encountered that could not be avoided. For safety reasons, blasting would only take place in remote locations away from residents and occupied buildings. With implementation of APMs NOI-4 and NOI-5, blasting would not result in structural damage to existing buildings or vibration impacts to sensitive receptors.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
4.14-3. Long-term increases in operational noise. Long-term operational noise would result from stationary sources (e.g., corona noise from power lines, transformer noise from substations, and various noise sources from maintenance operations such as vegetation clearance and vehicles traveling on access roads). However, operation of the action alternatives would not result in any additional stationary noise sources or substantial increases in operational noise sources relative to existing conditions.	LTS (Alts. 1-4)	No mitigation is required for any of the alternatives.	LTS (Alts. 1-4)
Notes: NI – no impact LTS – less-than-significant impact PS – potentially significant impact S – significant impact SU – significant and unavoidable impact			

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